

- The overridden base method is not a sealed method.
  - The override declaration and the overridden base method have the same return type.
  - The override declaration and the overridden base method have the same declared accessibility. In other words, an override declaration cannot change the accessibility of the virtual method.
- An override declaration can access the overridden base method using a base-access. In the example

```

class A
{
    int x=10;
    public virtual void Display()
    {
        MessageBox.Show("x= {0}",x);
    }
}
class B:A
{
    int y=20;

    public override void Display()
    {
        base.Display();
        MessageBox.Show("y= {0}",y);
    }
}

private void ButCalculate_Click(object sender, EventArgs e)
{
    A a = new A();
    B b = new B();
    b.Display();
}

```

The `base.Display()` invocation in B invokes the Display method declared in A. A base-access disables the virtual invocation mechanism and simply treats the base method as a nonvirtual method. Had the invocation in B been written `((A) this).Display()`, it would recursively invoke the Display method declared in B, not the one declared in A, because Display is virtual and the runtime type of `((A) this)` is B.

Only by including an override modifier can a method override another method. In all other cases, a method with the same signature as an inherited method simply hides the inherited method.

In the example  
class A  
{

```

public virtual void Display()           {
    MessageBox.Show("A.Display");
}
}
class B:A
{
    public virtual void Display() //Causes a warning.
    {
        MessageBox.Show("B.Display");
    }
}

```

The `Display` method in `B` does not include an override modifier and therefore does not override the `Display` method in `A`. Rather, the `Display` method in `B` hides the method in `A`, and a warning is reported because the declaration does not include a new modifier.

In the example

```

class A
{
    public virtual void Display()
    {
        MessageBox.Show("A.Display");
    }
}
class B:A
{
    new private void Display()
    {
        MessageBox.Show("B.Display");
    }
}
class C:B
{
    public override void Display()
    {
        MessageBox.Show("C.Display");
    }
}

private void ButCalculate_Click(object sender, EventArgs e)
{

```

```

    A a = new A();
    B b = new B();
    C c = new C();

```